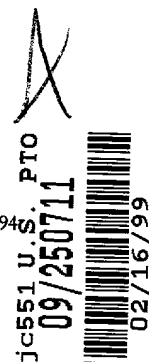




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February 16, 1999

VIA EXPRESS MAIL RECEIPT NO. EM330442288US

The Honorable Assistant Commissioner
for Patents
BOX PATENT APPLICATION
Washington, D.C. 20231

Re: Continuation Application for United States Letters Patent

Applicants: Peter J. Kight
Mark A. Johnson
Tamara K. Christenson
Regina Lach
Philip Pointer
Kenneth Cook

Filed: February 16, 1999

Title: **SYSTEM AND METHOD FOR ELECTRONICALLY PROVIDING
CUSTOMER SERVICES INCLUDING PAYMENT OF BILLS,
FINANCIAL ANALYSIS AND LOANS**

Attorney Docket No.: 1761100-b075803

Continuation of: SN 08/372,620, filed January 13, 1995
Examiner R. Weinhardt, Art Unit 2761

Dear Sir:

Enclosed for filing is a Continuation Application for United States Letters Patent for the above-referenced invention. Please find:

1. A Specification of 31 pages including 33 Claims, an Abstract, and an attached Exhibit A;
2. Seven sheets of Drawings;
3. A copy of the Declaration and Power of Attorney filed in the parent applications, SN 08/372,620 and SN 07/736,071;

The Honorable Assistant Commissioner
for Patents

BOX PATENT APPLICATION

February 16, 1999

Page 2

4. Authorization Re Deposit Account (in duplicate);
5. Check in the amount of \$1,930 (Filing fee of \$760, \$234 for 13 Claims in excess of 20, and \$936 for 12 Independent Claims in excess of three); and
6. Certificate of Filing by Express Mail.

Also enclosed is our postcard receipt which we ask that you acknowledge and return to us.

Very truly yours,



Mark E. Duell
Reg. No. 40,597

Enclosures

cc: William C. Buckham, Esq. (w/ encl.)
Curtis A. Loveland, Esq. (w/o encl.)
Laurie N. Jacques, Esq. (w/o encl.)

COLUMBUS/0511078 03



1 **SYSTEM AND METHOD**
2 **FOR ELECTRONICALLY PROVIDING CUSTOMER SERVICES**
3 **INCLUDING PAYMENT OF BILLS, FINANCIAL ANALYSIS AND LOANS**

4 RELATED APPLICATIONS

5 This is a continuation of co-pending Application for United States Letters Patent
6 Serial No. 08/372,620, filed January 13, 1995, which will issue as U.S. Patent No 5,873,072
7 on February 16, 1999, which was a continuation of co-pending application for United States
8 Letters Patent Serial No. 07/736,071, filed on July 25, 1991, which issued as United States
9 Patent No. 5,383,113 on January 17, 1995, each having the common assignee of the present
10 invention and each incorporated herein by reference for all purposes.

11 BACKGROUND AND SUMMARY OF THE INVENTION

12 The present invention relates generally to apparatus and methods for paying bills.
13 More particularly, the present invention is a computerized system for paying bills whereby
14 a consumer may contact a single source from a remote location via a telephone, a computer
15 terminal with modem, or other electronic means, to direct the single source to pay the
16 consumer's bills instead of the consumer writing checks for each bill. A microfiche appendix
17 has been submitted with the parent case of this Application Serial No. 07/736,071, which
18 issued as United States Letters Patent No. 5,383,113 on January 17, 1995, which contains

1 the program code of the present invention and which in its entirety is incorporated herein by
2 reference. An additional hard copy of the appendix is attached as Exhibit A.

3 It has been common for many years for consumers to pay monthly bills by way of
4 a personal check written by the consumer and sent by mail to the entity from which the bill
5 or invoice was received. Consumers have used other ways to pay bills, including personally
6 visiting the billing entity to make a cash payment. In today's economy, it is not unusual for
7 a consumer to have several regular monthly invoices to pay. Writing individual checks to
8 pay each invoice can be time-consuming and costly due to postage and other related
9 expenses.

10 A need exists for a method whereby a consumer can contact a single source and
11 inform the source to pay various bills of the consumer, to have the source adjust the
12 consumer's account with the consumer's financial institution (i.e., bank, credit union, savings
13 and loan association, etc.) to reflect a bill payment, and to actually pay the billing entity a
14 specified amount by a particular time. The system should be efficient and not unreasonably
15 expensive and relatively simple for a consumer to interact with. Some banks have attempted
16 to provide a service for making payment to a few billing entities to which the banks have
17 established relations. The banks that do provide that type of service are limited in that they
18 provide the service only for their own customers since the banks have not developed a
19 system for accurately acquiring and processing account numbers and balances of customers
20 of all other banking institutions and coordinating that information with bill payment.

1 Furthermore, banks have not developed a system for managing the risks involved in
 2 providing such a service and the inherent complexities of providing the service to consumers
 3 other than the bank's own customers. Therefore, a need exists for a single source bill
 4 payment system that would be available to any consumer, regardless of where the consumer
 5 banks and regardless of what bills are to be paid.

6 The present invention is designed to fulfill the above listed needs. The invention
 7 provides a universal bill payment system that works regardless of the consumer's financial
 8 institution and bill to be paid. The present invention provides a computerized system by
 9 which a consumer may pay bills utilizing the telephone, a computer terminal, or other
 10 electronic, data transmission means. Transactions are recorded against the consumer's
 11 account wherever he or she banks. The consumer may be an individual or a business, large
 12 or small. The present invention works regardless of where the consumer banks.

13 The method of the present invention includes: gathering consumer information and
 14 creating a master file with banking information and routing codes; inputting payment
 15 instructions by the consumer at a convenient location (e.g., at home), typically remote from
 16 the payment service provider, by using an input terminal such as a push-button telephone;
 17 applying the payment instructions to the consumer's file; using computer software of the
 18 present invention to examine various files to determine such things as what is the appropriate
 19 form of payment based on variables involving banking institutions and merchants;
 20 comparing each transaction against a dynamic credit file and routing based on set parameters;

1 and, if the payment system determines that everything is ready for payment to be made,
2 adjusting the consumer's account (usually by debiting) and making payment directly to the
3 billing entity. The single source service provider for consumer bill payment could be any
4 entity with the capability to practice the invention as described hereinafter. The foregoing
5 and other objects and advantages will become more apparent when viewed in light of the
6 accompanying drawings and following detailed description.

7 BRIEF DESCRIPTION OF THE DRAWINGS

8 Figure 1 is a diagrammatical representation of the creation of a consumer database;

9 Figure 2 is a diagrammatical representation of the establishment of a merchant's
10 (billing entities) database and the making of payments;

11 Figure 3 is a diagrammatical representation of the creation of a consumer pay table;

12 Figures 4a is a diagrammatical representation of a payment processing cycle;

13 Figure 4b is a continuation of the diagram of Figure 4a;

14 Figure 4c is a continuation of the diagram of Figure 4b;

15 Figure 5 is a diagrammatical representation of a computer hardware system that may
16 be used for accomplishing the present invention; and

17 Figure 6 is a diagrammatical representation of another computer hardware system that
18 may be used for accomplishing the present invention.

Accepted for Publication

1 DESCRIPTION OF PREFERRED EMBODIMENT(S)

2 Referring now to the drawings, Figure 1 illustrates the steps in the creation of a
3 consumer database for use with the present invention. The first step in the process is to
4 establish a consumer's data records on the system. This may be accomplished by the
5 consumer completing an authorization form 20 which would contain the needed information
6 to input into the system concerning the consumer. This information may include the
7 consumer's name, address, telephone number and other applicable information. The
8 consumer would also provide a voided check from the consumer's personal checking
9 account. The consumer's information may then be manually input via a keyboard 52 into the
10 consumer database record 22. Default amounts may be set for an individual credit line
11 parameter and for a total month-to-date parameter. These amounts establish the maximum
12 unqualified credit risk exposure the service provider is willing to accept for an individual
13 transaction and for the collective month-to-date transactions of a consumer. As explained
14 hereinafter, the service provider may be at risk when paying a consumer's bills by a check
15 written on the service provider's account.

16 From the voided check, the consumer's bank routing transit and individual account
17 numbers at an institution are input into the computer system. This information may be edited
18 against an internal financial institutions file (FIF) database 24 of the present invention. FIF
19 24 is a database of financial institutions' identification codes and account information for the
20 consumer. This file edits the accuracy of the routing transit number and the bank account

number. If the numbers do not correspond with the correct routing and bank numbers, they are rejected and the data entry is done again. FIF 24 in conjunction with the software of the present invention also updates the consumer database 22 for both electronic and paper draft routing and account information. The needed information may be obtained from each banking institution and each consumer.

The consumer is notified by the service provider of his or her local phone number access and personal security code for informing the service provider that a bill is to be paid. This information may be stored in a phone access table 26. The personal security code may be much like an ATM machine four digit code. In addition, to comply with federal law, an electronic pre-note 28 will be created to be sent to the consumer's bank to inform the bank that the service provider is authorized to debit the consumer's account. For further security to the service provider, a consumer credit record 30 may be obtained. The default credit limit amounts over which the service provider may be unwilling to assume financial risk may be modified based on the information obtained from the credit report 30.

In Figure 2 the steps are shown for establishing merchants to be paid and the making of a payment. The consumer must inform the service provider or processor of a merchant's name, address, phone number and the consumer's account number with the merchant 32. The term "merchant" as used herein is intended to pertain to any person or entity that the consumer wishes to pay and is not to be limited to the usual merchants most consumers pay, such as the electric company, a home mortgage lender, etc. This information is put into a

1 merchant master file database 42 (MMF). The consumer may also indicate whether the
2 merchant is a variable or fixed merchant. A variable merchant is one in which the date and
3 amount of payment will vary each month. A fixed merchant is one in which the date and
4 amount remain the same each month. If the merchant is fixed, the frequency of payment
5 may be other than monthly, such as weekly, quarterly, etc. The consumer should inform the
6 service provider of the date on which the merchant is to be paid and the amount to be paid.

7 Through a telecommunications terminal 34 (e.g., a push-button telephone or
8 computer terminal), a consumer may initiate payment of bills. Through the terminal, the
9 consumer may access his merchant list and input the payment date and amount. The system
10 may be provided with a payment date editor 36 to insure that the date is valid and logical
11 (i.e., payment dates already in the past or possibly a year or more into the future would be
12 questioned). As payments are initiated, a consumer "checkbook register" may be created and
13 automatically updated to reflect this activity. The merchant list can be visible on the
14 consumer's personal computer screen. On a personal computer a consumer may enter
15 merchant payment amounts and payment dates on the computer screen and then transmit this
16 information to the service provider.

17 By telephone, the list may be presented by programmed voice. The voice may be
18 programmed to ask the consumer if a particular merchant (selected from the consumer's
19 MMF, which may be updated from time to time) is to be paid and to tell the consumer to
20 press 1 if yes, or press 2 if no. If yes, the voice may instruct the consumer to enter the

1 amount to be paid by pressing the numbers on a touch tone phone. The asterisk button could
 2 be used as a decimal point. After the amount is entered, the voice may ask the consumer to
 3 enter the date on which payment is to be made to the merchant. This may be accomplished
 4 by assigning each month a number, such as January being month 01. The consumer may
 5 then enter month, day and year for payment. The programmed voice may be accomplished
 6 with a VRU (voice response unit) available from AT&T or other vendors. It may
 7 communicate with a data processor to obtain consumer information. At the end of the
 8 consumer's session on the terminal a confirmation number may be sent to the consumer,
 9 providing a record of the transaction.

10 In Figure 3 the steps are shown for the creation of the consumer pay table 38 and
 11 making updates to it. The consumer's files may be received at the service provider on a front
 12 end processor 40 that interfaces with the telecommunications network. The consumer's
 13 records may be edited 44 for validity by comparing to the merchants' account scheme. Any
 14 new merchant records are added to the consumer's pay table. New merchants are compared
 15 to the MMF 42 and appropriately cross-referenced to the pay table to check if a merchant
 16 record already exists. If no merchant record exists, a merchant record will be created on the
 17 MMF 42.

18 Payment records may also be received on the service provider's processor. The
 19 payment may first go through a validation process against the pay table. The validation
 20 process checks for duplicate payments and if duplicates are found they are sent to a reject

1 file. The validation process also verifies that merchants are set up and may check for
2 multiple payments to be paid to a particular merchant. Orders for payment go to the
3 consumer pay table to determine when the payment should be released and how it will be
4 released for payment.

5 The service provider may pay merchants by a draft or check (paper) or by electronic
6 funds transfer. To create a draft that will pass through the banking system, it must be
7 specially inked. This may be accomplished by a printer which puts a micr code on drafts,
8 like standard personal checks. For example, as shown in Figure 5, the front end processor
9 40 may be a DEC VAX which is connected to an IBM main frame 46 Model 4381.
10 Consumers may call by telephone 35, a number that passes through the private bank
11 exchange (PBX) 39 and contacts a voice response unit 41 in association with the front end
12 processor 40. After the consumer's payment instructions are received an analysis is
13 performed to determine the most cost effective and least risk mode of payment for the service
14 provider to use. One preferred mode of payment is electronic funds transfer through the
15 Federal Reserve Automated Clearing House (ACH) Network 47. If the service provider is
16 not a bank, a bank intermediary may be needed to be connected to the Federal Reserve
17 Network. Another payment mode is a charge to the consumer's credit card through the RPS
18 Network 49. Additionally, an IBM Laser Printer attached to a micr post printer 48 may be
19 used by the service provider to send drafts 76 or consolidated checks 78 to merchants. The
20 main frame 46 has data storage means 50 and runs the FIF 24 and MMF 42 programs. It

1 may also have a tape drive or telecommunication interface for accomplishing electronic
2 funds transfer. It should be recognized that various other hardware arrangements could be
3 used to accomplish the present invention. Figure 6 illustrates a similar arrangement for use
4 when the consumer is using a personal computer 37 to instruct the service provider. The
5 personal computer may access the front end processor 40 through the standard X.25 Network
6 43.

7 Referring now to Figures 4a, 4b and 4c, the payment process is shown. The payment
8 process may be cycled 56 each day or more or less frequently. The first step is to establish
9 when payment items are to be processed. This may be accomplished through a processing
10 calendar 58. A processing calendar 58 may be built into the system. The calendar 58
11 enables the system to consider each date, including weekends and the Federal Reserve
12 holidays. Payments are released from the consumer pay table 38 using the due date. Any
13 bank date, payments, or payments within a period such as four business days may be released
14 the same day. All future payment dates would be stored in the consumer pay table 38.
15 On-line inquiry may be made on the consumer pay table 38. The service provider has on-line
16 capability to make changes to the consumer payment upon request until the day the payment
17 is released. A consumer's merchant change may also affect the consumer's payment on the
18 pay table 38.

19 The method of payment to the merchant may be either paper (draft or check) or
20 electronic. There are several factors in the process used to determine if a payment will be

released as a paper item, or an ACH electronic transaction (automated clearing house; service provider is a party to transaction). Each consumer may be assigned a status such as: active = good; inactive = bad; and, pending = uncertain, risky. If a consumer's status is pending 60, when reviewing the payment file with the processing calendar 58, the payment should go out as a draft paper to protect the service provider. When payment is made by draft, the service provider is not a contractual party to the transaction. The consumer's bank account codes are actually encoded onto the draft prepared by the service provider and act much like the consumer's personal check. The draft has been specially designed for this process. The draft is payable to either the service provider or the particular merchant. This allows the draft to be delivered to the merchant for payment and depositing, but allows the draft to be legally payable by the bank, with proper authorization. Additionally, posting information for the merchant is contained on the body of the draft. To the applicant's knowledge, it is the first time a draft has been used in such a manner and with this unique design to accomplish this. If the consumer's bank transit number does not indicate an electronic bank 62 (i.e. , a banking institution that will accept electronic funds transfer), the program associated with FIF 24 sends the payment as a draft. A pre-note 28 is required any time 64 new banking information is entered on a consumer and the bank shows on FIF 24 as an electronic receiving bank. The pre-note period is ten (10) days under federal law. Any payments released during this period are sent as paper.

The third manner in which the service provider may pay bills is by a check written on the service provider's account. A consolidated check may be written if many customers have asked the service provider to pay the same merchant. Under this method of payment the service provider assumes some risk since the service provider writes the check on its own account. The service provider is later reimbursed by the (consumer's) banking institution.

As a means of minimizing risk to the service provider, any transaction may be compared to the MMF 42 credit limit. For example, if the check limit is greater than zero and the payment is \$50.00 or less 66, the item may be released as electronic 74 or by service provider check 78. If the payment is greater than \$50.00 but less than or equal to the merchant credit limit 68, the payment may be released as electronic payment 74 or check 78. Any payments within the merchant's credit limit 70 are added to the consumer's monthly ACH balance 72. This provides a monthly total billing day to billing day summary of the consumer's electronic payment activity. Any transaction may be compared to the consumer's database credit limit parameters. If a payment amount is greater than the consumer's credit limit, the item is released as a draft 76 which is written on the consumer's account. If the payment amount plus the total of electronic payments in a particular month is greater than the consumer's credit limit, the item is released as a draft 76. Items not released as paper are initiated as an ACH debit against the consumer's account.

The consumer database may be reviewed for proper electronic funds transfer (EFT) routing. Payment to the merchant may be accomplished one of three ways, depending on the

1 merchant's settlement code. Various merchant's settlement codes may be established. For
2 example, a merchant set up with a settlement code "01" results in a check and remittance list
3 78 being mailed to the merchant. Merchants with a settlement code, such as "10" produce
4 an ACH customer initiated entry (CIE). Merchants with a settlement code, such as, "13"
5 produce a remittance processing system (RPS) credit.

6 In the consumer pay table, for fixed payments, a payment date gets rolled to the next
7 scheduled payment date on the pay table. The number of remaining payments counter is
8 decreased by one for each fixed payment made. For variable payments once made, the
9 payment date is deleted on the consumer pay table. The schedule date and amount on the
10 consumer pay table roll to zero. A consumer payment history may also be provided which
11 show items such as process date as well as collection date, settlement method, and check
12 number in addition to merchant name and amount.

13 The software of the present invention is designed in part to make several decisions
14 relating to particular transactions for consumers. The following example is provided to more
15 fully describe the software. This example is not intended to limit the application to the
16 details described in the example and is only provided to further enhance the description of
17 the invention already stated above.

18 For this example, assume that a consumer has five transactions of varying amounts
19 for which the consumer has asked the service provider to arrange payment. For simplicity,
20 assume that the five payments are to be made on the same day. First, the consumer database

22 is edited to validate the status, banking institution, and pre-note flags associated with the consumer's requested payments. The account numbers provided by the consumer for the merchants to be paid, are also checked to determine if they are valid. Assuming the merchant account numbers are valid, the program begins with the first dollar analysis.

For purposes of this example, the five payments the consumer has requested are in the amounts of: \$25.00; \$75.00; \$150.00; \$250.00; and \$1,000.00. The program will consider each dollar amount individually as it goes through the various edit modes. The first edit may be called a \$50.01 edit. In this example, any transaction that is less than \$50.01 is automatically sent as an ACH debit to the consumer's account. This means that the service provider uses ACH to electronically transfer funds from the consumer's account to the service provider's clearing account.

In this example, the initial payment of \$25.00 will satisfy the \$50.01 edit and therefore will be paid without any further edits being conducted for this particular payment. Continuing with the example, the next edit may be a merchant dollar edit that is established for the specific merchant to which the transaction is being sent. For purposes of this example, this edit is set at \$100.00 for all merchants. Different dollar edits can be incorporated for different merchants. In the example, the second payment request of the consumer, for \$75.00, meets the \$100.00 merchant edit parameter and is sent as an ACH debit to the consumer's account. Note that the \$75.00 payment would not have satisfied the

1 \$50.01 edit and therefore would have passed on to the second edit which in this case, is the
2 merchant dollar edit.

3 The remaining three payments in the example exceed both the \$50.01 edit and the
4 merchant \$100.00 edit and therefore, go to the next edit. In the example, the next edit is for
5 a consumer individual transaction limit set at \$200.00. The \$150.00 payment is less than the
6 \$200.00 consumer individual transaction limit and is, therefore, sent as an ACH debit to the
7 consumer's account and paid. The other two remaining payments yet to be made exceed the
8 \$200.00 limit in this example and pass to the next edit.

9 In the next edit, which happens to be the last edit in the example, the consumer's
10 month-to-date "unqualified" risk limit is checked. In the example, the month-to-date limit
11 is set at \$1,500. Assume that for this particular consumer \$400.00 of month-to-date
12 payments have already been made on the consumer's behalf. Added to the \$400.00 would
13 be the three payments made above for \$25.00, \$75.00 and \$150.00. So an additional \$250.00
14 is added to the \$400.00 month-to-date for a total of \$650.00 "unqualified" risk for the current
15 month-to-date amount. The next payment to be made is for \$250.00 and would fall within
16 the \$1,500 month-to-date limit when added to the current \$650.00 risk amount. Therefore,
17 the \$250.00 payment is made and an ACH debit is sent to the consumer's account. This
18 brings the total month-to-date "unqualified" risk amount to \$900.00. The final \$1,000
19 payment has not been paid and would send the "unqualified" risk amount over \$1,500 when
20 added to the \$900.00. Since the final payment of \$1,000 in the example fails the consumer

1 month-to-date limit edit, the \$1,000 payment would be sent as a paper draft directly drawn
 2 on the consumer's account, and for which the service provider has no liability. In the
 3 example, the final step would be updating the consumer month-to-date current total to
 4 \$900.00.

5 The apparatus for and method of bill payment of the present invention and many of
 6 its attendant advantages will be understood from the foregoing description. It will be
 7 apparent that various changes may be made in the form and steps thereof without departing
 8 from the spirit and scope of the invention or sacrificing all of its advantages.

WE CLAIM:

1 1. A method of paying bills using a computer, comprising the steps of:
2 receiving requests to pay a plurality of bills of a particular merchant on behalf
3 of a plurality of particular consumers;
4 searching a database of deposit account numbers, each representing a
5 respective deposit account maintained at one of a plurality of associated financial institutions
6 by a plurality of consumers including each of the plurality of particular consumers, to
7 identify the deposit account numbers of the deposit accounts of each of the plurality of
8 particular consumers;
9 paying the plurality of bills of each of the plurality of particular consumers
10 by a single financial instrument.

1 2. The method of claim 1 wherein the step of paying the plurality of bills
2 by a single financial instrument includes the step of directing payment of the plurality of bills
3 from funds in a deposit account of a service provider.

1 3. The method of claim 2 further comprising the step of:
 transferring funds to the deposit account of the service provider from the
deposit accounts represented by each of the identified deposit account numbers.

1 4. The method of claim 2 wherein the step of paying the plurality of bills
2 includes the step of preparing a check written on funds in the deposit account of the service
3 provider.

1 5. The method of claim 2 wherein the step of paying the plurality of bills
2 includes the step of initiating an electronic funds transfer from funds in the deposit account
3 of the service provider.

1 6. The method of claim 3 wherein the step of transferring funds to the
2 deposit account of the service provider includes the step of preparing a draft written on funds
3 in the deposit account represented by a particular consumer's identified deposit account
4 number.

1 7. The method of claim 3, wherein the step of transferring funds to the
2 deposit account of the service provider includes the step of initiating an electronic funds
3 transfer from funds in the deposit account represented by a particular consumer's identified
4 deposit account number.

1 8. A method of paying bills using a computer, comprising the steps of:

2 receiving a request to pay a bill of a particular merchant on behalf of a
3 particular consumer;

4 searching a database of deposit account numbers, each representing a
5 respective deposit account maintained at one of a plurality of associated financial institutions
6 by one of a plurality of consumers including the particular consumer, to identify a deposit
7 account number of the deposit account of the particular consumer; and,

8 directing payment of the bill from funds in the deposit account represented
9 by the identified deposit account number.

1 9. The method of claim 8 wherein the step of directing payment of the
2 bill from funds in the deposit account further comprises the step of:

3 preparing a draft drawn on funds in the deposit account.

1 10. The method of claim 9 further comprising the step of:
2 including posting information on the draft.

1 11. The method of claim 8 wherein the step of directing payment of the
2 bill from funds in the deposit account further comprises the step of:

3 initiating an electronic funds transfer from the deposit account.

3 merchant database having a payment type indicator associated with each of a plurality of
4 merchants including the particular merchant.

1 16. The method of claim 12 further comprising the steps of:
2 receiving a deposit account number representing a deposit account maintained
3 at one of a plurality of associated financial institutions by a particular consumer;
4 storing the deposit account number in a database of deposit account numbers;
5 comparing a particular consumer's deposit account number in the deposit
6 account number database with the particular consumer's deposit account number in a
7 financial institutions database to determine if the consumer's deposit account number in the
8 deposit account number database is correct; and,
9 correcting the deposit account number if the deposit account number in the
10 deposit account number database is not correct.

1 17. The method of claim 12 wherein said step of selecting a payment type
2 further comprises the step of:
3 selecting a payment type from a check written on funds in a deposit account
4 other than the deposit account represented by the identified deposit account number, a draft
5 written on funds in the deposit account represented by the identified deposit account number,

6 and an electronic funds transfer of funds in the deposit account represented by the identified
7 deposit account number;

1 18. The method of claim 12 further comprising the steps of:
2 determining if the request to pay the bill is a duplicate of a previous request;
3 and,
4 terminating the request if the request is a duplicate request.

1 19. A method of paying bills using a computer, comprising the steps of:
2 receiving a request to pay a bill of a particular merchant on behalf of a
3 particular consumer;

4 searching a database of deposit account numbers, each representing a
5 respective deposit account maintained at one of a plurality of associated financial institutions
6 by one of a plurality of consumers including the particular consumer, to identify a deposit
7 account number of the deposit account of the particular consumer;

8 paying the bill from funds in a deposit account of the service provider; and,
9 transferring funds to the deposit account of the service provider from the
10 deposit account represented by the identified deposit account number.

1 20. The method of claim 19 further comprising the steps of:

determining if the request to pay the bill is a duplicate of a previous request;

and,

terminating the request if the request is a duplicate request.

21. An article of manufacture, comprising:

a computer readable medium; and

computer software stored on the computer readable medium, the computer software comprising a set of instructions directing a computer to perform the steps of:

receiving requests to pay a plurality of bills of a particular merchant on behalf of a plurality of particular consumers;

searching a database of deposit account numbers, each representing a respective deposit account maintained at one of a plurality of associated financial institutions by a plurality of consumers including each of the plurality of particular consumers, to identify the deposit account numbers of the deposit accounts of each of the plurality of particular consumers; and,

paying the plurality of bills of each of the plurality of particular consumers by a single financial instrument.

22. An article of manufacture, comprising:

a computer readable medium; and

computer software stored on the computer readable medium, the computer software comprising a set of instructions directing a computer to perform the steps of:

- receiving a request to pay a bill of a particular merchant on behalf of a particular consumer;
- searching a database of deposit account numbers, each representing a respective deposit account maintained at one of a plurality of associated financial institutions by one of a plurality of consumers including the particular consumer, to identify a deposit account number of the deposit account of the particular consumer;
- paying the bill from funds in a deposit account of the service provider;
- and,
- transferring funds to the deposit account of the service provider from the deposit account represented by the identified deposit account number.

23. An article of manufacture, comprising:

- a computer readable medium; and
- computer software stored on the computer readable medium, the computer software comprising a set of instructions directing a computer to perform the steps of:

- receiving a request to pay a bill of a particular merchant on behalf of a particular consumer;

7 searching a database of deposit account numbers, each representing
8 a respective deposit account maintained at one of a plurality of associated financial
9 institutions by one of a plurality of consumers including the particular consumer, to identify
10 a deposit account number of the deposit account of the particular consumer; and,

11 directing payment of the bill from funds in the deposit account
12 represented by the identified deposit account number.

1 24. An article of manufacture, comprising:

2 a computer readable medium; and

3 computer software stored on the computer readable medium, the computer
4 software comprising a set of instructions directing a computer to perform the steps of:

5 receiving an instruction to pay a bill of a particular merchant on behalf
6 of a particular consumer;

7 searching a database having deposit account numbers, each
8 representing a respective deposit account maintained at one of a plurality of associated
9 financial institutions by a plurality of consumers including the particular consumer, to
10 identify the deposit account number of the deposit account of the particular consumer;

11 selecting a payment type; and,

12 directing payment of the bill by the type of payment selected from
13 funds in the identified deposit account.

25. A system for paying bills using a computer, comprising:

means for receiving requests to pay a plurality of bills of a particular merchant on behalf of a plurality of particular consumers;

a database of deposit account numbers, each representing a respective deposit account maintained at one of a plurality of associated financial institutions by a plurality of consumers including each of the plurality of particular consumers, searchable by the computer to identify the deposit account numbers of the deposit accounts of each of the plurality of particular consumers at one of the plurality of associated financial institutions;

means for paying the plurality of bills of each of the plurality of particular consumers by a single financial instrument.

26. A system for paying bills using a computer, comprising:

means for receiving a request to pay a bill of a particular merchant on behalf of a particular consumer;

a database of deposit account numbers, each representing a respective deposit account maintained at one of a plurality of associated financial institutions by one of a plurality of consumers including the particular consumer, searchable by the computer to identify a deposit account number of the deposit account of the particular consumer; and,

8 means for directing payment of the bill from funds in the deposit account
9 represented by the identified deposit account number.

10 27. The system of claim 26 further comprising:

11 means for selecting a payment type.

1 28. A system for paying bills using a computer, comprising:

2 means for receiving a request to pay a bill of a particular merchant on behalf
3 of a particular consumer;

4 a database of deposit account numbers, each representing a respective deposit
5 account maintained at one of a plurality of associated financial institutions by one of a
6 plurality of consumers including the particular consumer, searchable by the computer to
7 identify a deposit account number of the deposit account of the particular consumer;

8 means for paying the bill from funds in a deposit account of the service
9 provider; and,

10 means for transferring funds to the deposit account of the service provider
11 from the deposit account represented by the identified deposit account number.

1 29. A system for paying bills using a computer, comprising:

2 a communications switch connected to a network for receiving requests to
3 pay a plurality of bills of a particular merchant on behalf of a plurality of particular
4 consumers;

5 a database of deposit account numbers, each representing a respective deposit
6 account maintained at one of a plurality of associated financial institutions by a plurality of
7 consumers including each of the plurality of particular consumers, searchable by the
8 computer to identify the deposit account numbers of the deposit accounts of each of the
9 plurality of particular consumers; and,

10 a computer processor in communication with the network and the database
11 for paying the plurality of bills of each of the plurality of particular consumers by a single
12 financial instrument.

1 30. A system for paying bills using a computer, comprising:

2 a communications switch connected to a network for receiving a request to
3 pay a bill of a particular merchant on behalf of a particular consumer;

4 a database of deposit account numbers, each representing a respective deposit
5 account maintained at one of a plurality of associated financial institutions by one of a
6 plurality of consumers including the particular consumer, searchable by the computer to
7 identify a deposit account number of the deposit account of the particular consumer; and,

8 a computer processor in communication with the network and the database
9 for directing payment of the bill from funds in the deposit account represented by the
10 identified deposit account number.

1 31. The system of claim 30 wherein the computer processor selects a
2 payment type.

3 32. A system for paying bills using a computer, comprising:
4 a communications switch connected to a network for receiving a request to
5 pay a bill of a particular merchant on behalf of a particular consumer;

6 a database of deposit account numbers, each representing a respective deposit
7 account maintained at one of a plurality of associated financial institutions by one of a
8 plurality of consumers including the particular consumer, searchable by the computer to
9 identify a deposit account number of the deposit account of the particular consumer at one
10 of the plurality of associated financial institutions; and,

11 a computer processor in communication with the network and the database
12 for paying the bill from funds in a deposit account of the service provider and transferring
13 funds to the deposit account of the service provider from the deposit account represented by
14 the identified deposit account number.

1 33. A database for use with a system for paying bills using a computer,
2 comprising:
3 deposit account numbers, each representing a respective deposit account
4 maintained at one of a plurality of associated financial institutions by one of a plurality of
5 consumers including the particular consumer, the database being searchable by the computer
6 to identify a deposit account number of the deposit account of the particular consumer at one
7 of the plurality of associated financial institutions.

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ABSTRACT

A computerized payment system by which a consumer may instruct a service provider by telephone, computer terminal, or other telecommunications means to pay various bills without the consumer having to write a check for each bill. The system operates without restriction as to where the consumer banks and what bills are to be paid. The service provider collects consumers' information, financial institutions' information and merchant information and arranges payment based on a financial risk analysis to the merchants according to the consumers' instructions.

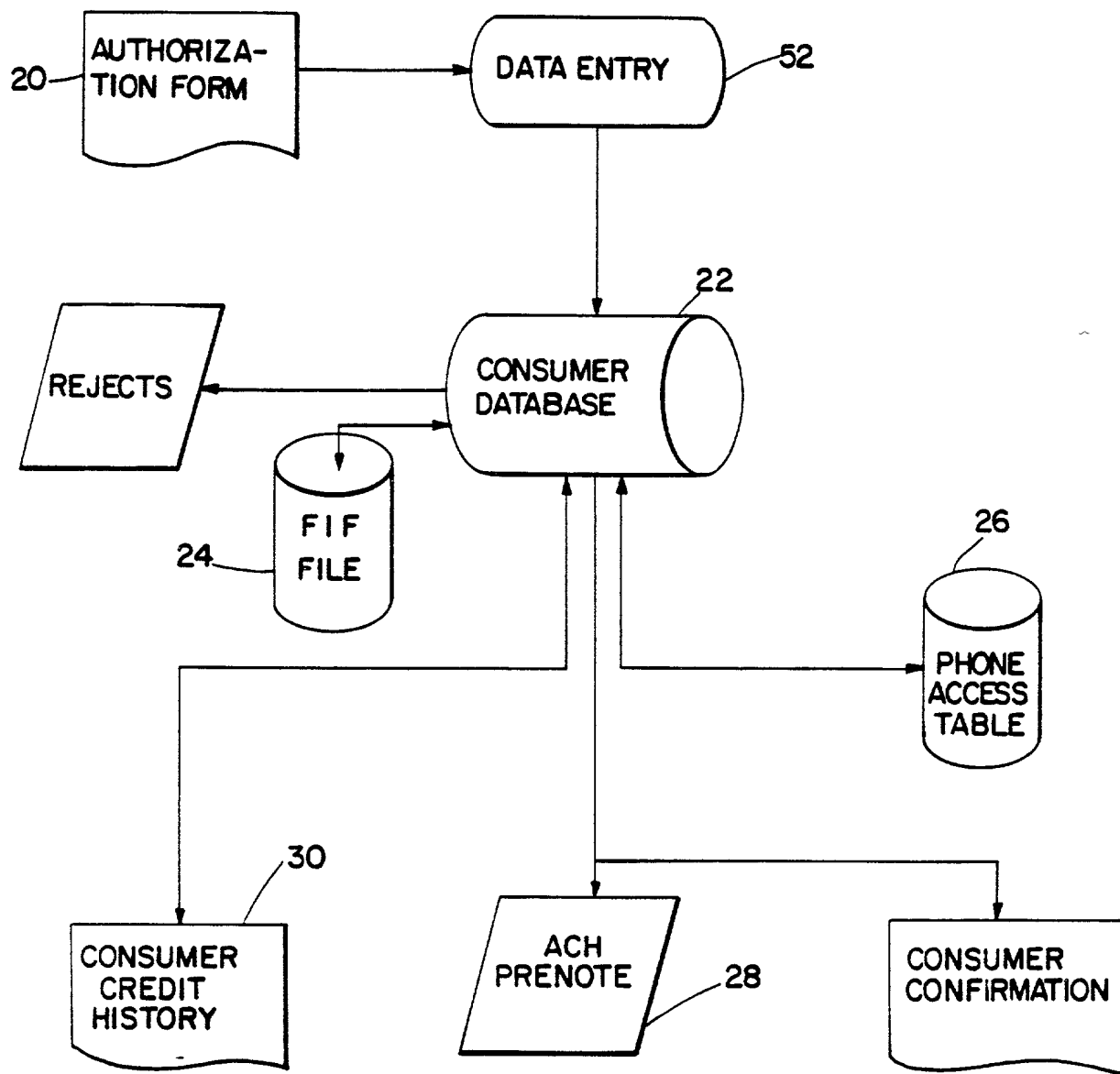


Fig. 1

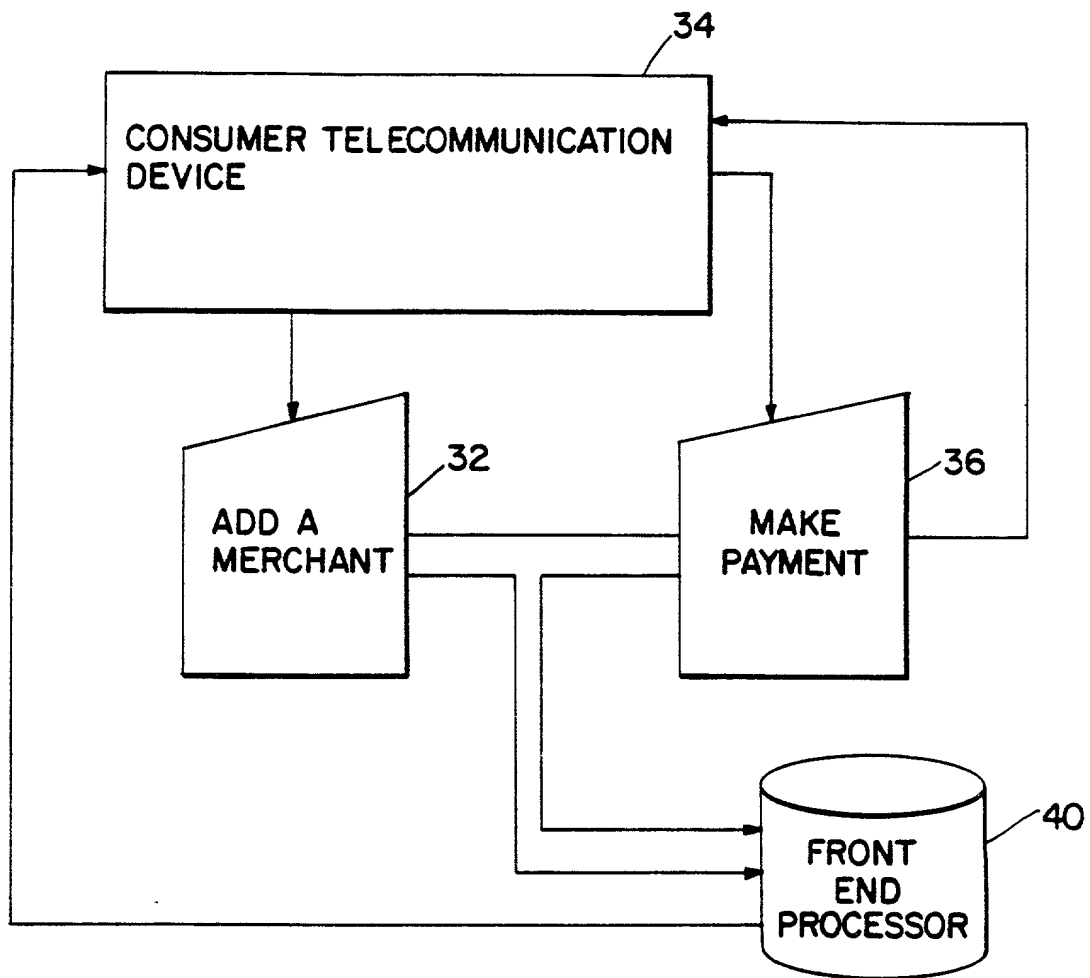


Fig. 2

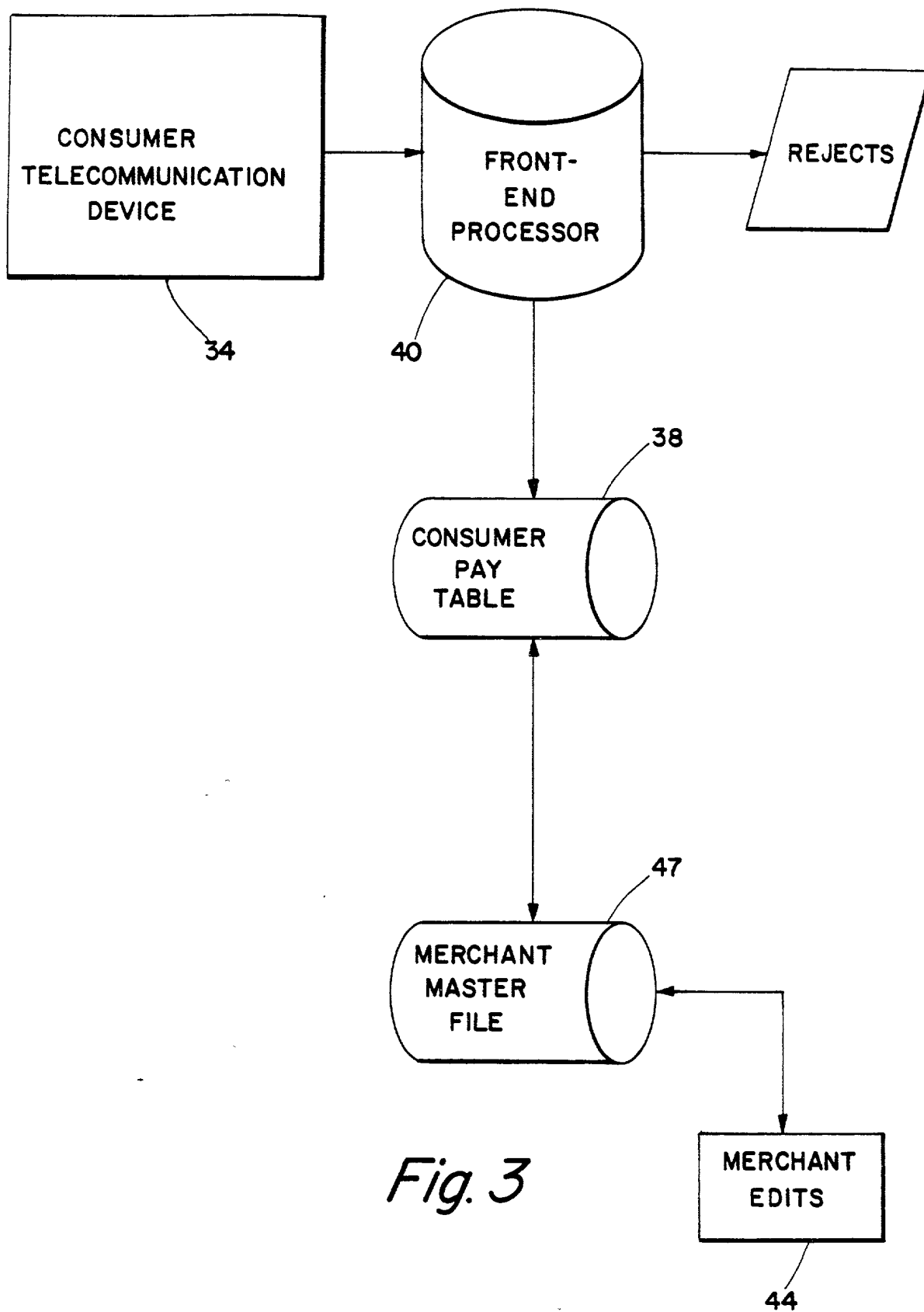


Fig. 3

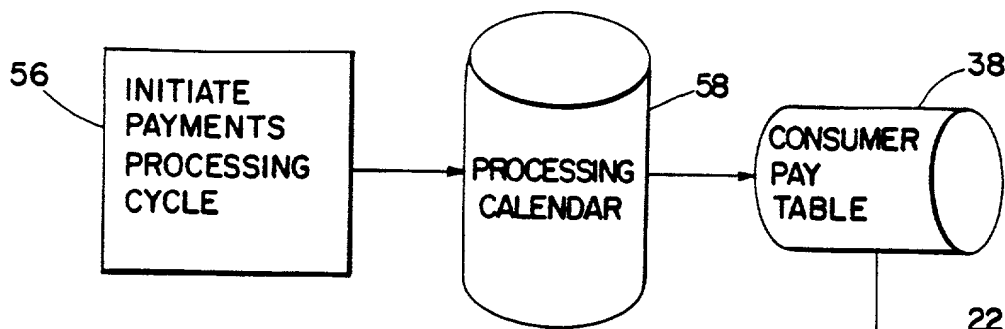


Fig. 4B

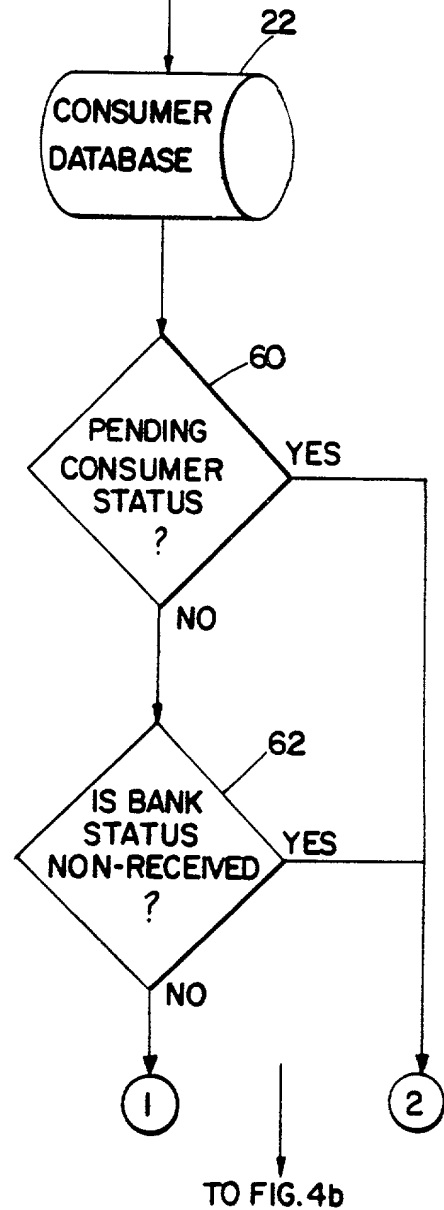
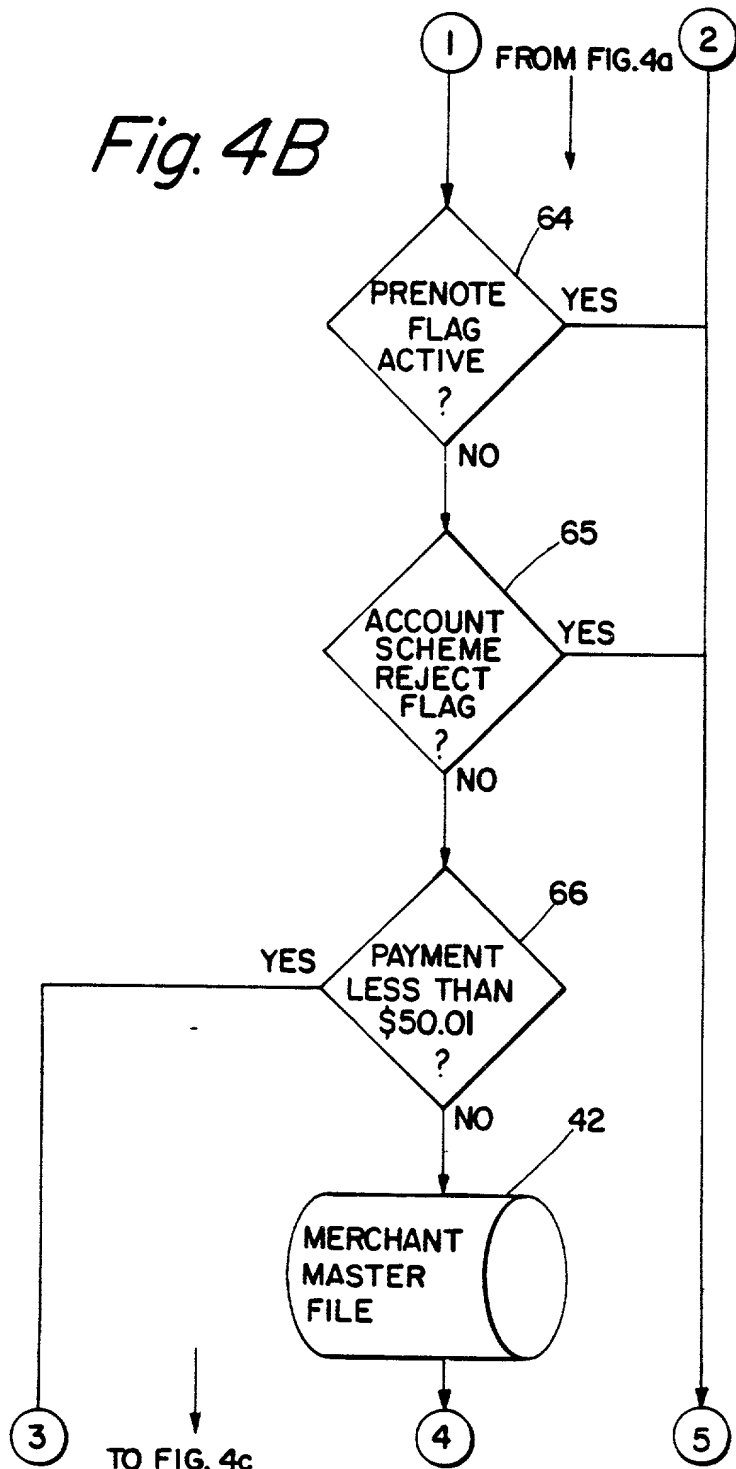
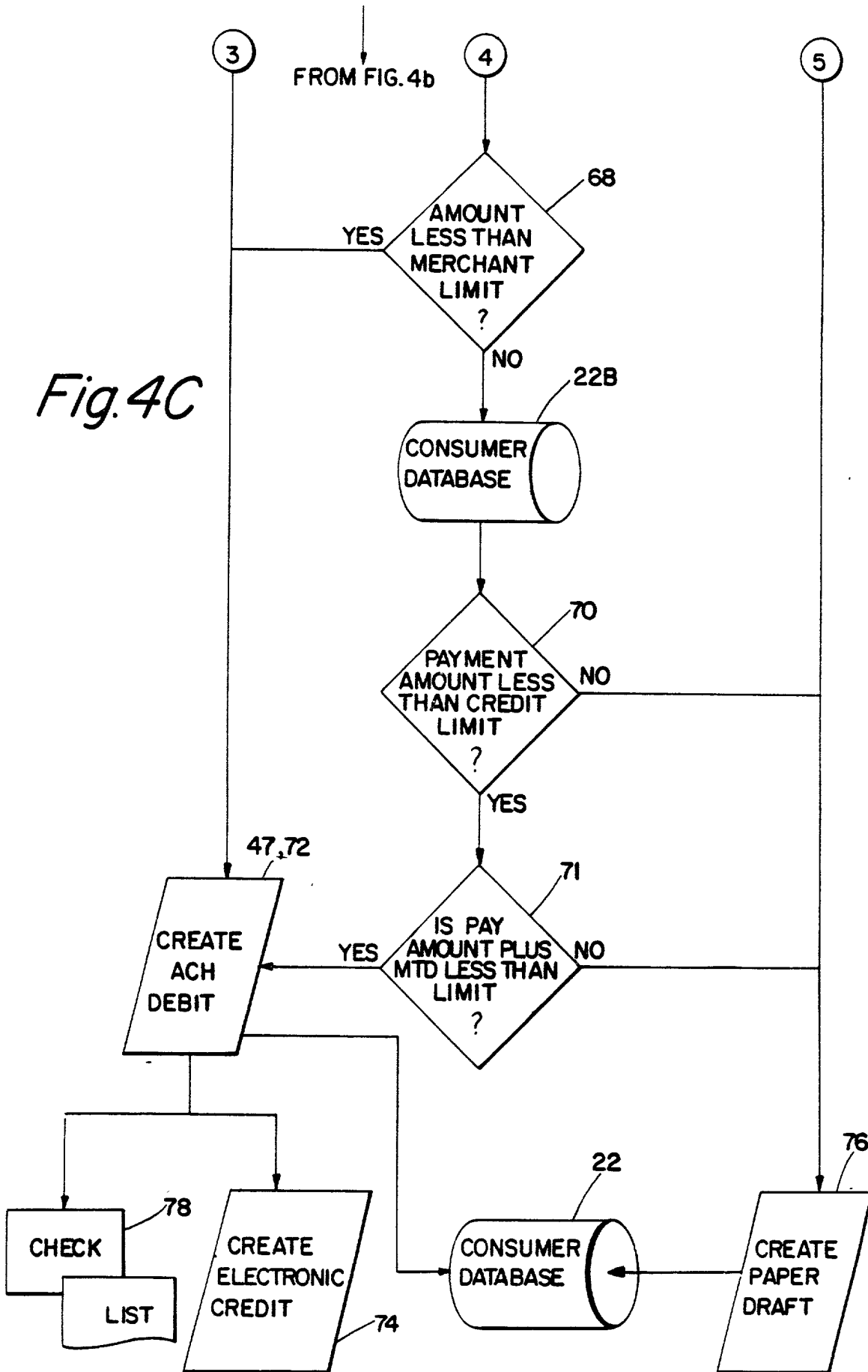
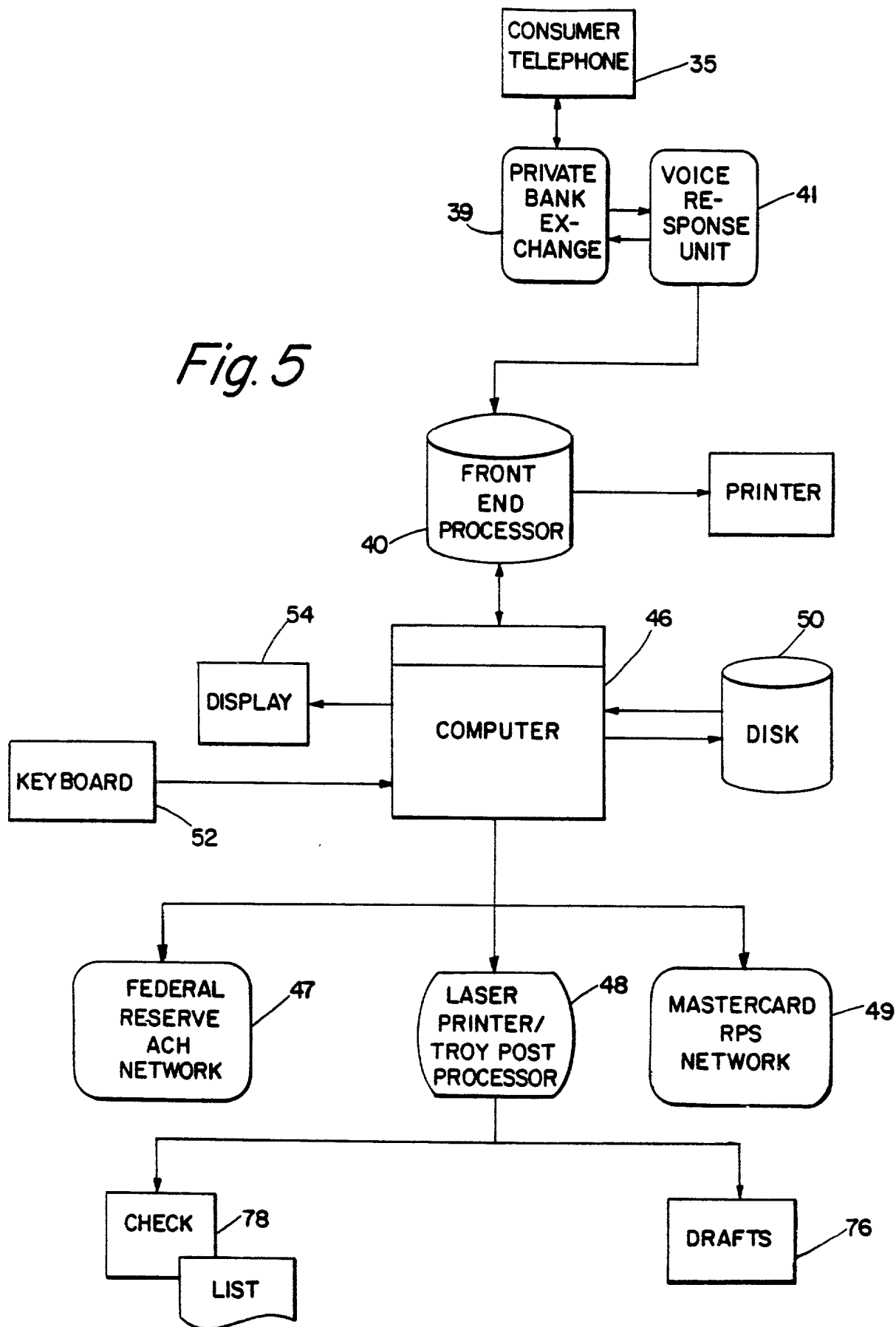
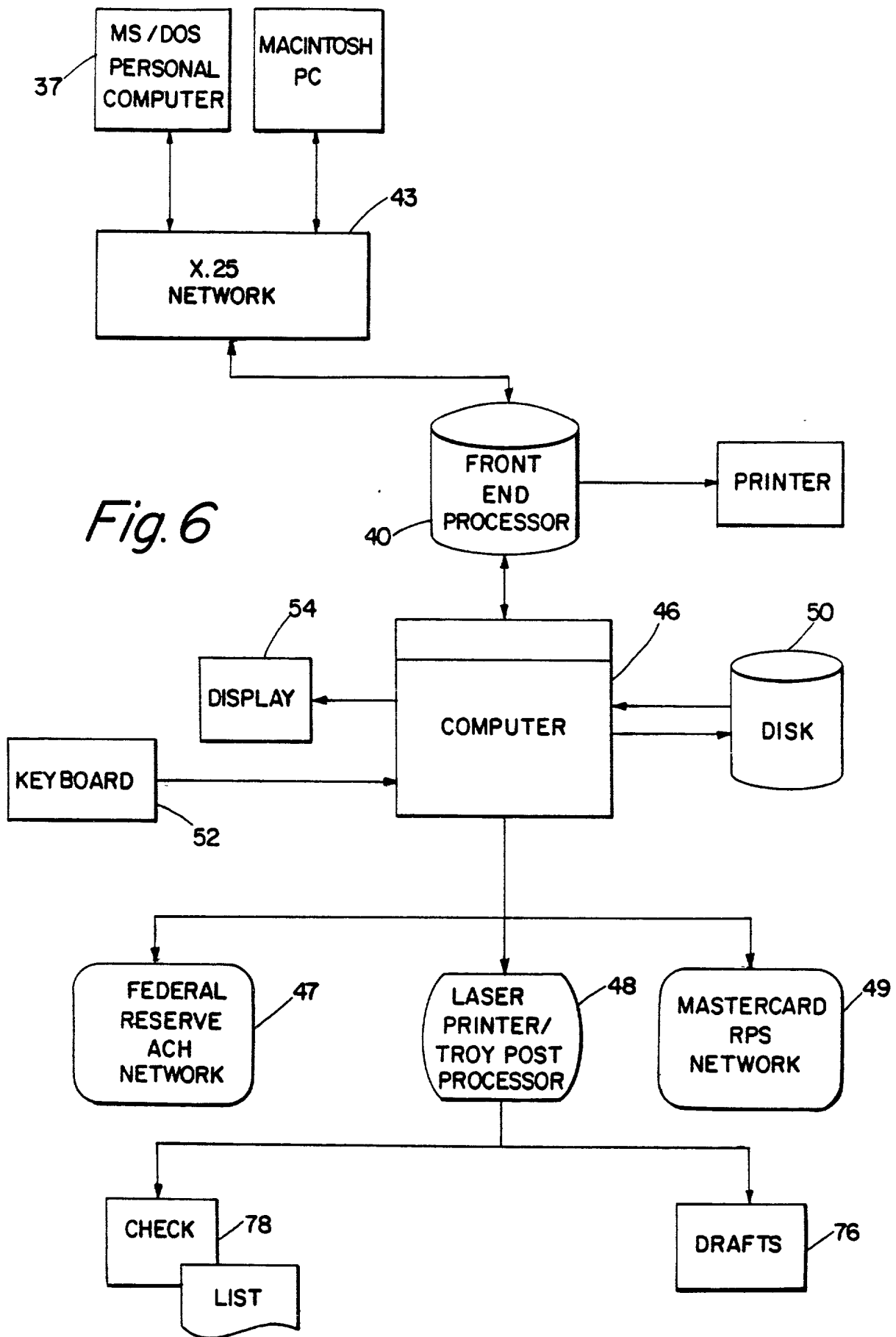


Fig. 4A







DECLARATION FOR PATENT APPLICATION

Docket No. 1761100-75803

As the below named inventors, we hereby declare that:

Our residence, post office addresses and citizenships are as stated below next to our names.

We believe we are the original, first and joint inventors of the subject matter which is claimed and for which a patent is sought on the invention entitled APPARATUS FOR AND METHOD OF BILL PAYMENT the specification of which is filed herewith.

We hereby state that we have reviewed and understand the contents of the above identified specification, including the claims, as amended by any amendment referred to above.

We acknowledge the duty to disclose information which is material to the examination of this application in accordance with Title 37, Code of Federal Regulations, §1.56(a).

We hereby claim foreign priority benefits under Title 35, United States Code, §119 of any foreign application(s) for patent or inventor's certificate listed below and have also identified below any foreign applications for patent or inventor's certificate having a filing date before that of the application on which priority is claimed:

Prior Foreign Applications: None

We hereby claim the benefit under Title 35, United States Code, §120 of any United States application(s) listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States application in the manner provided by the first paragraph of Title 35, United States Code, §112, we acknowledge the duty to disclose material information as defined in Title 37, Code of Federal Regulations, §1.56(a) which occurred between the filing date of the prior application and the national or PCT international filing date of this application:

<u>None</u>		
(Application Serial No.)	(Filing Date)	(Status-patented, pending, abandoned)

We hereby appoint the following attorney and/or agent to prosecute this application and to transact all business in the Patent and Trademark Office connected therewith: Jeffrey S. Standley (Reg. No. 34,021)
Eric S. Lucas (Reg. No. 34,215)

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41 South High Street
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We hereby declare that all statements made herein of our knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Full name of inventor: Peter J. Kight

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_____ Citizenship: U.S.A.

Full name of inventor: Mark A. Johnson

Inventor's signature Mark A. Johnson Date 7/25/91

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Dublin OH 43017 Citizenship: U.S.A.

Full name of inventor: Tamara K. Christenson

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Full name of inventor: Regina Lach

Inventor's signature Regina Lach Date 7/25/91

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Full name of inventor: Philip Pointer

Inventor's signature Philip L Pointer Date 7/25/91

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Full name of inventor: Kenneth Cook

Inventor's signature Kenneth W Cook Date 7/25/91

Residence: 4484 Wrangell Rd.
Dakota OH 43030 Citizenship: U.S.A.

DECLARATION FOR PATENT APPLICATION

Docket No. 1761100-75803

As the below named inventors, we hereby declare that:

Our residence, post office addresses and citizenships are as stated below next to our names.

We believe we are the original, first and joint inventors of the subject matter which is claimed and for which a patent is sought on the invention entitled APPARATUS FOR AND METHOD OF BILL PAYMENT, the specification of which was filed on July 25, 1991 in patent application Serial No. 07/736,071.

We hereby state that we have reviewed and understand the contents of the above identified specification, including the claims, as amended by any amendment referred to above.

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Prior Foreign Applications: None

We hereby claim the benefit under Title 35, United States Code, §120 of any United States application(s) listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States application in the manner provided by the first paragraph of Title 35, United States Code, §112, we acknowledge the duty to disclose material information as defined in Title 37, Code of Federal Regulations, §1.56(a) which occurred between the filing date of the prior application and the national or PCT international filing date of this application:

<u>None</u>		
(Application Serial No.)	(Filing Date)	(Status-patented, pending, abandoned)

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Full name of inventor: Peter J. Kight

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Full name of inventor: Mark A. Johnson

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Inventor's signature Tamara K. Christenson Date 8/27/91

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Residence: _____
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Full name of inventor: Philip Pointer

Inventor's signature _____ Date _____

Residence: _____
_____ Citizenship: U.S.A.

Full name of inventor: Kenneth Cook

Inventor's signature _____ Date _____

Residence: _____
_____ Citizenship: U.S.A.